

**UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF TENNESSEE
NASHVILLE DIVISION**

UNITED STATES OF AMERICA,)	
)	
Plaintiff,)	
)	
v.)	No. 3:09-0812
)	Judge Sharp
RICHARDSON M. ROBERTS and)	
BUCKSNORT RR RANCH LLC,)	
)	
Defendants.)	

MEMORANDUM

This dam case involves claims by the United States that Defendants’ creation of an earthen dam and its consequent impoundment of water violates the Clean Water Act (“CWA”), 33 U.S.C. § 1251 *et seq.* Defendants have filed Motions in Limine regarding the proffered expert testimony of Rodney R. Knight (Docket No. 68); Richard D. Martin (Docket No. 71); Peter M. Stokely (Docket No. 73); Nicholas E. Crawford (Docket No. 75); and Donald W. Hubbs (Docket No. 77).

The Motions in Limine have been extensively briefed. Indeed, the Motions and supporting and opposing Memoranda consist of almost 200 pages. Additionally, the Court held evidentiary hearings on the Motions from November 8-10, 2011. For the reasons which follow, Defendants’ Motions in Limine will be denied, except in relation to the expert witness testimony of Donald W. Hubbs.¹

¹ Defendants have also filed a Motion in Limine, seeking to bar William L. James from testifying as an expert (1) on the United States Army Corp of Engineers’ (“Corp of Engineers”) permitting practices, and (2) on the defense of estoppel which is raised in relation to remedies. During the evidentiary hearing, the parties reached an agreement regarding the former issue and, with regard to the later, the Court has

I. BACKGROUND

Sometime in the summer of 2005, Defendants constructed a 60-foot-high and 400-foot-long dam by placing dirt, sand, gravel, rock and other fill material into what the Government has characterized as “a pristine stream ecosystem” in southeastern Humphreys County, Tennessee. The dam is in the middle of a 2,000-plus acre ranch owned by Defendants, and impounds water creating a 60 acre reservoir.

According to the Government’s theory of the case, the dam was built on a perennial stream which constitutes a “water of the United States,” without a permit from the Corp of Engineers. Specifically, the dam is on Snake Creek (part of the upper channel of Egypt Hollow) which is a tributary to Tumbling Creek, which, in turn, is a tributary to the Duck River, the nearest traditionally navigable water.

II. LEGAL FRAMEWORK

The expert witnesses who are the subject of Defendants’ Motions in Limine all purport to offer opinions on the central issue of this case, to wit, whether the dam was built on a perennial stream and a “water of the United States.” Defendants seek to exclude those experts from testifying, or to prohibit those experts from opining about certain matters. They raise a host of arguments, all of which center around the contentions that the evidence the experts offer is not relevant within the meaning of Fed. R. Evid. 401, the probative value of the evidence is substantially outweighed by the danger of unfair prejudice within the meaning of Fed. R. Evid. 403, and/or the proposed experts and their opinions do not meet the requirements of Fed. R. Evid. 702.

indicated that it will consider the Motion if, and when, a jury finds liability. Likewise, the Court will defer ruling on Defendants’ Motion in Limine relating to William Griggs (Docket No. 79), a witness the Government intends to call during the remedy phase concerning the feasibility and achievability of removing the dam.

Rule 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Fed. R. Evid. 702. The present version of Rule 702 codified the Supreme Court's decision in Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 589 (1993), which held that the then-effective Rule 702 "clearly contemplates some degree of regulation of the subjects and theories about which an expert may testify" and "assign[s] to the trial judge the task of ensuring that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand." Id. at 589 & 597. This "gatekeeping" function has as its objective "to ensure the reliability and relevancy of expert testimony." Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 152 (1999). "It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." Id.

In considering challenges to the reliability of scientific evidence, the focus is on the methodology utilized by the expert, not on the conclusion drawn. See, Daubert, 509 U.S. at 590. Factors which the Supreme Court in Daubert identified as being possibly relevant include: (1) whether the theory, conclusion, or technique has been tested or is testable; (2) whether it has been published or subjected to peer review; (3) whether it has a potential or known error rate; and (4) whether the theory, conclusion, or technique enjoys general acceptance within the relevant scientific community. Id. at 593–94; see, Nelson v. Tennessee Gas Pipeline Co., 243 F.3d 244, 251 n.5 (6th Cir. 2001).

These factors do not apply to every situation, nor are they exclusive. “Rather, . . . the trial judge must have considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable.” Kumho, 526 U.S. at 152. “That is to say, a trial court should consider the specific factors identified in Daubert where they are reasonable measures of the reliability of expert testimony.” Id.

In short “Daubert attempts to strike a balance between a liberal admissibility standard for relevant evidence on the one hand and the need to exclude misleading ‘junk science’ on the other.” Best v. Lowe's Home Centers, Inc., 563 F.3d 171, 176-77 (6th Cir. 2009). Still, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” Daubert, 509 U.S. at 596.

Because the Court is required to determine whether the proffered expert testimony in this case “both rests on a reliable foundation and is relevant to the task at hand,” id. at 597, some consideration must be given to what the Government must prove to establish its claims under the CWA.

“To establish liability under the Act, the government must prove that (1) a person (2) discharged a pollutant (3) from a point source (4) into waters of the United States (5) without a permit.” United States v. Cundiff, 555 F.3d 200, 213 (6th Cir. 2009). The Court has previously granted summary judgment in favor of the Government on all of these elements, except whether the creeks and tributaries at issue in this case are “waters of the United States.” (Docket No. 180).

Even with the case so limned, what the Government must actually prove to establish liability is open to considerable debate. In its most recent discussion of “waters of the United States,” the

Supreme Court entered what has been oft-characterized as a “fractured” opinion. See, e.g., United States v. Robison, 505 F.3d 1208, 1221 (11th Cir. 2007); United States v. Freedman Farms, Inc., 786 F.Supp.2d 1016, 1018 (E.D.N.C. 2011); United States v. Fabian, 522 F.Supp.2d 1078, 1084 (N.D. Ind. 2007).

In Rapanos v. United States, 547 U.S. 715 (2006), the Supreme Court considered consolidated cases from the Sixth Circuit about “whether four Michigan wetlands, which lie near ditches or man-made drains that eventually empty into traditional navigable waters, constitute ‘waters of the United States’ within the meaning of the Act.” Id. at 729. In a 4–1–4 decision, the Court vacated the Sixth Circuit’s conclusion that the Corp of Engineers had jurisdiction and remanded for further proceedings to determine whether the wetlands were subject to the restrictions of the CWA.

The authors of each of the three separate opinions considered earlier Supreme Court cases interpreting “navigable water” under the CWA, including United States v. Riverside Bayview Homes, Inc., 474 U.S. 121 (1985), and Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, 531 U.S. 159 (2001) (“SWANCC”). Even though agreeing that the statutory phrase “waters of the United States” encompasses some waters not navigable in the traditional sense, the opinions set forth different views as to how courts should determine whether particular wetlands are subject to the CWA. The Fourth Circuit succinctly summarized the three views as follows:

Although recognizing the continuing validity of Riverside Bayview Homes, a majority of the Court found troubling the Corps’ assertion of jurisdiction over wetlands adjacent to tributaries far away from, and unimportant to, any traditional navigable water. See [Rapanos] at 726, 730–33, 106 S.Ct. 455 (plurality opinion); id. at 776, 779–80, 106 S.Ct. 455 (Kennedy, J., concurring in the judgment). Accordingly, a fractured Court proposed two different ways to limit the reach of its

earlier ruling so as not to allow jurisdiction over wetlands lying alongside “remote and insubstantial” ditches and drains. Id. at 778, 106 S.Ct. 455 (Kennedy, J., concurring in the judgment). The Rapanos plurality suggested that wetlands should only fall within CWA jurisdiction when they: (1) are adjacent to a “relatively permanent body of water connected to traditional interstate navigable waters”; and (2) have “a continuous surface connection with that water.” Id. at 742, 126 S.Ct. 2208 (plurality opinion). Justice Kennedy, concurring, found this test too limiting. Instead, he borrowed language from SWANCC to establish an alternative new test for jurisdiction over adjacent wetlands. Id. at 779–80, 126 S.Ct. 2208 (Kennedy, J., concurring in the judgment). Under his formulation, when the Corps “seeks to regulate wetlands based on adjacency to nonnavigable tributaries,” it must establish that a “significant nexus” exists “between the wetlands in question and navigable waters in the traditional sense.” Id. at 779, 782, 126 S.Ct. 2208. The dissent, which drew four votes, found both of these tests too stringent. It thus suggested that in the future, jurisdiction should be established if either the plurality’s or Justice Kennedy’s test is met. Id. at 810, 126 S.Ct. 2208 (Stevens, J., dissenting).

Precon Development Corp., Inc. v. Army Corps of Eng’rs, 633 F.3d 278, 288 (4th Cir. 2011) (footnote omitted).

If Rapanos represents a fractured viewpoint on CWA jurisdiction, the Courts of Appeals’ attempts to apply Rapanos have only compounded the fracture. The Seventh and Eleventh Circuit have held that Justice Kennedy’s concurring opinion sets forth the standard for CWA jurisdiction, United States v. Gerke Excavating, Inc., 464 F.3d 723, 724–25 (7th Cir.2006); United States v. Robison, 505 F.3d 1208, 1221–22 (11th Cir.2007), while the First, Third, and Eighth Circuits have held that both the plurality opinion and Justice Kennedy’s concurring opinion are to be used in determining “waters of the United States” under the CWA. United States v. Johnson, 467 F.3d 56, 62–64 (1st Cir.2006); United States v. Donovan, 2011WL 5120605 at *6 (Oct. 31, 2011); United States v. Bailey, 571 F.3d 791, 799 (8th Cir.2009). “Several Circuit Courts of Appeals have expressly reserved the issue of which Rapanos test or tests, governs CWA enforcement actions.” Donovan, 2011WL 5120605 at *6 n.7 (collecting cases from the Fourth, Fifth, Sixth, and Ninth Circuits).

Closer to home, the Sixth Circuit considered Rapanos in United States v. Cundiff, 555 F.3d 200, 206-213 (6th Cir. 2009) and observed that “[p]arsing any one of Rapanos’s lengthy and technical statutory exegeses is taxing, but the real difficulty comes in determining which – if any – of the three main opinions lower courts should look to for guidance.” Id. at 207. The court went on to observe that “[f]ortunately . . . jurisdiction is proper here under each of the primary Rapanos opinions and therefore we do not have to decide here, once and for all, which test controls in all future cases.” Id. at 208.

The Sixth Circuit’s fortune is this Court’s misfortune because the parties disagree over whether Justice Scalia’s plurality opinion or Justice Kennedy’s concurring opinion (or both) should be used in this case. This disagreement, raised in the context of yet another 75 pages of briefing on Defendants’ “Motion in Limine No. 1 Designating a Jury Instruction Defining ‘Navigable Waters’ Under the Clean Water Act” (Docket No. 62), is significant because some of the experts proffered by the Government speak to “waters of the United States” under the plurality opinion, while others address the issue under the concurring opinion.

For now, the Court has decided to defer ruling on the question, being of the view that, if and when this case goes to trial, there may be controlling precedent, or at least some further guidance on the issue. Thus, for purposes of the pending Motions in Limine, the Court assumes that the considerations set forth in both the plurality and concurring opinions in Rapanos are to be used by the jury in determining whether the allegedly perennial stream in this case constitutes a “water of the United States.”

III. APPLICATION TO THE PROFFERED OPINIONS IN THIS CASE

A. Motion In Limine Relating to Rodney R. Knight (“Knight”) (Docket No. 69)

Knight, an eighteen-year veteran of the United States Geological Survey (“USGS”), is a Hydrologist and Surface-water Specialist who holds a Bachelor of Science in civil and environmental engineering from Tennessee Technological University. The Government intends to call Knight at trial to testify that, prior to the construction of the dam, Snake Creek was likely a perennial stream at the location where the dam was built and also upstream of the dam.

Knight’s opinions are based upon his interpretation of the results of the Low-Flow and Flow-Duration (“LFFD”) program and the StreamStats module² which can be used in concert to develop estimates of low-flow characteristics of selected streams, including “an estimate of the lowest mean daily streamflow for seven consecutive days that occurs on average once every 10 years (7Q10).” (Docket No. 67-1 at 37-38). The 7Q10 is a “general index of a stream’s likely condition during periods of moderate to severe drought.” (*Id.* at 38).

According to Knight, application of the program to Defendants’ dam site and impoundment predicted that the pre-impoundment 7Q10 flow at these locations would have exceeded zero flow in nine out of 10 years. More specifically, a conservative estimate of the flow of water where the dam was built was 0.38 cubic feet per second, and, at the location upstream of the eventual dam site, the water flow in Snake Creek was 0.28 cubic feet per second, both of which allegedly qualify as perennial flow.

Both the LFLD program and the Streamstats module are publicly available on the Internet. Defendants argue that “[a]ll that Knight has done is to go to the Web, plug in two coordinates in the

² The LFFD program and the StreamStats module were “both developed by the USGS for application to streams in Tennessee.” (Knight Expert Report, Docket No. 67-1 at 37). “StreamStats is a web-based geographic information system tool that delineates a basin boundary, calculates drainage area, and develops area-weighted values for soil permeability factor, soil factor, and geologic factor.” (*Id.* at 39). “This information is then used as input to the LFFD program” which calculates estimates of low-flow and flow duration characteristics for a point on a stream[.]” *Id.*

upper channel of Egypt Hollow and read the water flow estimates that the Web program provides” and “has done nothing that a member of the general public cannot do.” (Docket No. 69 at 3). Defendants also argue that (1) Knight is not a statistician and not qualified to interpret the StreamStats and LLFD program results; (2) the programs were designed to estimate stream flows throughout the United States as a basis for future planning, not to assess historical flows of a specific stream; (3) the results of the program have never been admitted into evidence to show the historical characteristics of a single stream; (4) the program contains flaws, many of which are unpredictable and Knight is neither qualified nor prepared to discuss those flaws; and (5) Knight made no effort to “field-validate,” or “ground-truth” the results.³

The Court is unpersuaded by Defendants’ arguments. To begin with, even if running the LFLD program and StreamStat modules requires the mere imputing of coordinates, the results obtained would be pure gibberish to a layperson, as evidenced by the pages of seemingly meaningless numbers produced by running the program. (See, Docket No. 67-1 at 47-56). Based upon his extensive background in hydrology, and the fact that he routinely uses the LFLD program and StreamStat module in connection with his work, Knight is qualified to tell the jury what the 7Q10 value means, and that it represents an estimate based on various basin characteristics. This remains so, even though the LFLD program and StreamStat may have never before been offered as evidence in a case, since the Court’s concern is with reliability and the methodology employed. See, Libas, Ltd. v. United States, 193 F.3d 1361, 1368 (Fed. Cir. 1999) (“The lesson of the Supreme Court’s rejection of ‘general acceptance’ as the sole standard for expert testimony, in favor of the

³ Defendants also object to Knight’s proposed testimony on relevancy grounds, arguing that whether Snake Creek was “perennial” is not properly an issue in this case. The Court does not address this argument, or similar arguments in relation to other experts, because the Court has yet to definitively rule on which of the opinions in Rapanos controls the interpretation of “waters of the United States.”

Daubert–Kumho reliability standard is that ‘widespread use’ or ‘general acceptance’ is an imperfect proxy for reliability. The prevailing scientific wisdom is not always right, and, moreover, a requirement of ‘general’ or ‘widespread’ acceptance, by itself, may exclude reliable but novel or controversial methodologies.”).

That the programs may contain some flaws⁴ does not alter this conclusion because, according to Knight, “the methods used . . . have been subject to technical peer review by colleagues within and outside the USGS and produces estimates with *known* error terms and confidences intervals.” (*Id.* at 39, italics added). Regardless, even accepting that flaws in the program exist, that is something which can be revealed through cross-examination. *See, United States v. Phung*, 127 Fed. Appx. 594, 598 (3rd Cir. 2005) (citation omitted) (“‘good grounds’ for an expert's opinion may exist ‘even if the judge thinks that a scientist's methodology has some flaws such that if they had been corrected, the scientist would have reached a different result’”); *United States v. Mooney*, 315 F.3d 54, 63 (1st Cir.2002) (“Once a trial judge determines the reliability of the proffered expert’s methodology and the validity of his reasoning, the expert should be permitted to testify as to the inferences and conclusions he draws from it, and any flaws in his opinion may be exposed through cross-examination or competing expert testimony”).

Finally,⁵ the Court is not persuaded that Knight should be barred from testifying because he

⁴ Defendants’ argument that the programs are not reliable because they contain flaws and historically have been used for future planning is interesting in light of the fact that their own expert, Richard C. Young, uses StreamStats in connection with his work and relied on the module in preparing his own export report in this case.

⁵ The Court notes that Defendants also challenge Knight’s expertise as a hydrologist because, during his deposition, he did not correctly understand “basic hydrological terms” such as the difference “intermittent stream” and “ephemeral streams.” (Docket No. 69, at 9-10). By the time of the evidentiary hearing, Knight had a better understanding of the traditional use of such terms. Regardless, Knight’s use or misuse of certain terms goes to the weight of his testimony, and not whether he is able to interpret the results from the LFFD

did not field-validate,” or “ground-truth” the results he obtained. Defendants assert that had Knight visited the sight, he would have reason to question the reliability of his findings.⁶

Leaving aside the quarrel between the parties as to why Knight did not put “boots on the ground,” the 7Q10 value represents a statistical estimate of the lowest mean daily streamflow and, as the Government points out, it would take at least a decade to field validate the 7Q10 value. Further, it does not appear that field validating was even possible in light of the fact that the dam now covers a portion of Snake Creek.

B. Motion in Limine Relating to Richard D. Martin (“Martin”) (Docket No. 71)

Martin is an environmental scientist who holds a Bachelor of Science degree in Biological Service and Earth Science from Middle Tennessee State University. He is a licensed professional geologist with the state of Tennessee, as well as a Qualified Hydrological Professional.

Martin has been employed for 35 years in the environmental science field. He began his professional career as a § 401 permit compliance manager with the Tennessee Division of Water Quality Control. He then became a senior project manager and later a principal of EMPE, Inc., an engineering and environmental sciences consulting firm. After EMPE was sold to EnSafe, Inc., Martin worked for ENSafe as a senior project engineer. Since 2004 he has been employed by Griggs & Maloney Inc., another engineering and environmental consulting firm, where, among other things, he has worked as a consultant on stream restoration projects.

program and StreamStats module.

⁶ According to Defendants, they “compared the StreamStats/LFFD model estimates . . . to observed channel conditions in nearby streams that were accessible from public roads” and, “[i]n multiple instances, the StreamStats/LFFD analysis predicted stream flow (a 7Q10 more than zero) in watersheds in Egypt Hollow in which **no flow** routinely has been observed and documented in normal rainfall conditions.” (Docket No. 69 at 12, bold in original).

Martin is prepared to render several expert opinions in this case. Specifically with regard to the issue of liability,⁷ Martin intends to testify that (1) Snake Creek, at the location where the dam was constructed and for a “a significant distance upstream” is a perennial stream; (2) “Snake Creek, either alone or in combination with similarly situated land in the region, significantly affected and/or continues to affect the chemical, physical, and biological integrity” of the Duck River; (3) the construction of the reservoir in Snake Creek has impacted between 3,000 and 6,600 linear feet “of Snake Creek and unnamed tributaries”; and that continued “[o]peration of the reservoir . . . will result in further degradation of the chemical, physical, and biological quality of Snake Creek and confluent streams.” (Martin Expert Report, Docket No. 67-1 at 8).

Notwithstanding the numerous arguments from various angles raised by Defendants in their 45-page Memorandum, the Court concludes that Martin is qualified to render the foregoing opinions, that those opinions are based upon reliable methodologies, and that his testimony will be of assistance to the jury in determining whether the dam was placed on a “water of the United States.” In arriving at this conclusion, the Court has considered each of the arguments raised by Defendants in their Memorandum, but finds that a detailed written discussion of those arguments and sub-arguments would serve no useful purpose and would unduly lengthen this opinion. See, Nance v. City of Newark , 2010 WL 2483747 at *5 (D.N.J. June 4, 2010) (agreeing that expert’s opinions were conclusory and noting “the Court will not parse his export report line-by-line to determine which opinions are proper here”); Peters v. Nissan Forklift Corp. , 2008 WL 2625521 at *4 & n. 31 (E.D. La. Feb. 1, 2008) (“Counsel may reurge any relevancy arguments at trial,” but “the Court will

⁷ Martin is also prepared to opine that the Government’s proposed restoration plan would benefit the environment, an issue which would only become relevant if the jury finds liability.

not at this stage parse every other line of the expert report”). Instead, the Court addresses the most salient arguments raised by Defendants.

Defendants argue that Martin has “disclosed expertise in forty distinct opinions of scientific fact,” and these “opinions . . . require expertise in hydrology, biology, chemistry, engineering, environmental dynamics, economics and law.” (Docket No. 71 at 1). Even ignoring the fact that Martin is a professional hydrologist with extensive experience in environmental science⁸ which is itself an interdisciplinary academic field, see, Stepahie Tai, WHEN NATURAL SCIENCE MEETS THE DISMAL SCIENCE, 42 Ariz. St. L.J. 949, 955-56 (2010) (“[e]nvironmental science touches upon a number of areas once considered distinct in traditional science, including physics, chemistry, biology, geology, hydrology, and even paleontology”), it could be argued that Defendants vastly overstate, and sometimes cut too finely, what Martin intends to impart to the jury. His opinions really boil down to the contention that the Snake River is (and was) a perennial stream, and that the impoundment has affected the integrity of the Duck River.

To be sure, in formulating his opinion, Martin relied not just upon his own site visit, but also upon such things as topographical maps, statistical modeling, a stream survey and habitat assessment form, and the MACTEC report,⁹ all of which were prepared by others. However, experts may rely

⁸ At the evidentiary hearing (and to some extent in their brief) Defendants spent time on the fact that Martin has a B.S. degree, but has yet to finish his thesis for a Masters Degree, even though he completed his research in 1974. However, an expert can be qualified based on training or experience alone. Fed. Evid. 702 (*italics added*) (“a witness qualified as an expert by knowledge, skill, *experience, training*, or education, may testify . . .”). While there may be more credentialed witnesses, the jury can take this into account in accessing Martin’s credibility, just as it can take into account the fact that he is an employee, but not a principal of, Griggs & Maloney, and that, in Defendants’ view, Martin has acquired only “some vague knowledge from his various jobs[.]” (Docket No. 72 at 14).

⁹ This report was commissioned by Bucksnot Ranch, LLC and provided opinions about the effect on aquatic resources of a proposed impoundment at a different location on the ranch.

on data from others, at least to the extent that the data is of the type reasonably relied on by other experts in the field. Fed. R. Evid. 703; Tamraz v. Lincoln Elec. Co., 620 F.3d 665, 675 (6th Cir. 2010) (“an expert may in some circumstances rely on other experts’ testimony – see Fed. R. Evid. 703”); Matter of James Wilson Assoc., 965 F.2d 160, 172 (7th Cir. 1992) (“An expert is of course permitted to testify to an opinion formed on the basis of information that is handed to rather than developed by him – information of which he lacks first-hand knowledge and which might not be admissible in evidence no matter by whom presented.”). Martin claims that the items he relied upon fit that bill and other expert witnesses in this case, too, have relied upon data which they themselves did not compile.

Defendants also take issue with the reliability of some of the information used by Martin in formulating his opinion, including the StreamStats module. However, Defendants have not definitively shown that this material is, in fact, unreliable. This remains so, even though, for example, Defendants point to deposition testimony from other fact and/or expert witnesses which purport to show that the channel at issue was usually dry, and that geotechnical borings by Southern Consulting LLC demonstrate the water table at the impoundment to be eight feet below the surface, making a flowing stream impossible. Any question as to the accuracy of the data utilized by Martin is fodder for cross-examination, or opposing testimony by other experts. See, United States v. Bonds, 12 F.3d 540, 563 (6th Cir. 1993) (“[q]uestions about the certainty of the scientific results are matters for the jury” and the “assessment of the validity and reliability of the conclusions drawn by the expert is a jury question”).

Defendants chide Martin for stating, in at least three places in his expert report, that the Duck River is a “traditionally navigable water.” They claim he has no basis for determining that the Duck

River is a traditionally navigable water and errs by linking “traditionally” to “navigable waters” under the CWA because the CWA uses the term “navigable water” without the modifier. Even if Defendants are technically correct,¹⁰ it would exalt form over substance to bar Martin from stating that the Duck River is a traditionally navigable water inasmuch as the Court granted Defendants’ motion to have the Duck River deemed the closest traditionally navigable water (Docket Nos. 104 & 168).

Defendants also argue that Martin’s expert report is nothing more than a “book report,” that it is a “me too” opinion, and that it summarizes and is cumulative to other expert’s proposed testimony. (Docket No. 72 at 20 and 43-45). An expert’s “testimony cannot be the mere repetition of ‘the-out-of-court’s statement of others,” United States v. Luna, 649 F.3d 91, 105 (1st Cir. 2011), and “a court is free to exclude any expert testimony, including the testimony of an announced expert, if the testimony is cumulative or redundant under Fed. R. Evid. 403.” In re Air Crash Disaster, 86 F.3d 498, 527 (6th Cir. 1996). However, as the Court noted in orally granting the Government’s request to call more than three expert witnesses in this case, each proffered expert brings something new to the table,¹¹ including Martin. The Court does not view his opinions as being merely a “me too” acceptance of other expert’s opinions.

Finally with regard to Martin – as well as the other proposed experts for that matter – the goal of both the federal rules and Daubert is “to keep ‘junk science’ away from juries.” Thomas v.

¹⁰ Actually, there is a basis for Martin’s statements because, in his deposition, he indicated that he “knew” the Duck River was navigable since it was listed as such by the Corp of Engineers. (Martin Deposition, Docket No. 67-2 at 107).

¹¹ This conclusion also applies to Defendants’ contention that Nicholas C. Crawford’s testimony would be merely cumulative. The Court discusses Defendants’ other objections to this witness in subsection III. D., below.

Novartis Pharm. Corp., 2011 WL 3701816 at *2 (6th Cir. Aug. 23, 2011). This Court has “broad discretion to determine whether a putative expert’s testimony would be inadmissible junk science or instead would be testimony falling within the ‘range where experts might reasonably differ,’” *id.* (citation omitted), and finds that Martin’s proffered testimony falls into the latter camp.

C. Motion in Limine Relating to Peter M. Stokely (“Stokely”) (Docket No. 73)

Stokely is an environmental scientist employed by the Environmental Protection Agency (“EPA”). He holds a Bachelor of Science degree in Forest Research Management from West Virginia University. For the past twenty years, Stokely has “focused on the fields of aerial photography interpretation” and CWA regulations. (Stokely Expert Report, Docket No. 67-1 at 66). Based upon his review of aerial photography, Stokely is prepared to opine “that a decades old stream existed at the dam site prior to and up until the construction of the dam.” (*Id.* at 68).¹²

Stokely has been admitted as an expert in the field of aerial photography on 20-plus occasions. As is typical of the method employed by such interpreters, Stokely gathered aerial photographs of the area under consideration, and then undertook to analyze those photographs.

Specifically, Stokely reviewed some 14 aerial photographs of Egypt Hollow from 1953 through 2010 under various magnifications to analyze the features and conditions appearing on the photographs. He used a geographic information system (“GIS”) to geographically reference and overlay the photographs so that the same locations could more easily be examined across the various photographs under consideration, to examine specific features close up, and to look at Snake Creek in the context of the surrounding landscape. Additionally, Stokely looked at USGS and United

¹² In his expert report, Stokely also renders an opinion about whether Snake Creek is a perennial stream, but the Government has indicated that it will not present that opinion at trial.

States Department of Agriculture maps in an effort to confirm his conclusion that the aerial photographs showed a decades old stream at the dam site prior to its construction. Stokely is qualified to testify as an expert in this case.

The Defendants “do not contest Stokely’s qualifications or methodology in interpreting the images present in an *individual* aerial photograph,” but instead object to his “drawing conclusions that are not in the photograph by inferring them from the photograph,” to wit, “that a ‘decades-old stream’ existed up to the time that the dam was built.” (Docket No. 74 at 6-7, italics added). Defendants argue that the “inference” drawn by Stokely is actually contradicted by the photographs because some show what appears to be nothing more than dry land.

Were Stokely the only one to testify about whether there was a stream where the dam was built, there might be some merit to Defendants’ argument. However, Stokely will be called to present merely a piece of the puzzle. See, NutraSweet Co. v. X-L Engineering Co., 227 F.3d 776, 778 (7th Cir. 2000) (in conjunction with other tests which help to confirm the hypothesis, an expert can look at a sequence of aerial photos to determine the history of chemical dumping).

Moreover, the Court agrees with the Government that Stokely is not being presented to testify about inferences, but rather will be called to testify about what the photographs show based upon his admitted expertise in aerial photography interpretation. See, id. (“photographic analysis is a well-accepted technique [in CERCLA cases] so as to bear a sufficient indicia of reliability.”). To the extent that the Defendants believe that the pictures (and other evidence) suggest visible water in some photographs, but not in others, that is something which can be thoroughly explored on cross-examination, particularly since Stokely’s opinion is not based solely upon the existence or absence of water, but is also based upon his observation of drainage patterns and riparian vegetation.

(Docket No. 67-1 at 3).

D. Motion in Limine Relating to Nicholas C. Crawford, PhD (“Crawford”) (Docket No. 75)

Crawford is a “University Distinguished Professor” in the Department of Geography and Geology and Western Kentucky University (“WKU”).¹³ The author of “over 439 publications and technical reports dealing primarily with groundwater contamination of karst¹⁴ aquifers,” (Crawford Expert Report, Docket No. 67-1 at 35), he is a hydro-geologist and the founder of the Center for Cave and Karst Studies at WKU. Crawford proposes to testify in this case that “Snake Creek at the site of the a [sic] reservoir . . . was a perennial stream fed by ground water during base flow and by one known perennial spring (SP-3) located approximately 900 feet upstream.” (*Id.* at 30).

“Defendants do not challenge Professor Crawford on the basis of his qualifications,” and “stipulate that he is qualified as a hydrogeologist on the basis of education and experience.” (Docket No. 75 at 1). Instead, they argue that his report is unreliable because he (1) did not use any methodology in his assessment; (2) relies on others; (3) does not account for missing or contradictory data; (4) offers an irrelevant opinion; and (5) adds only cumulative evidence.

To the extent that the last four categories of arguments are not intertwined with the argument relating to Crawford’s methodology, the Court rejects the same for the reasons previously given in relation to the opinions of the other experts offered by the Government. That is to say, Crawford is entitled to rely on data that he did not generate, any flaws in the data can be inquired into on cross-examination, the opinion may be relevant depending upon how Rapanos is applied, and his

¹³ Although he retired a couple of years ago, Crawford is still on the university faculty and teaches an undergraduate course.

¹⁴ “Karst is a type of land formation formed by the dissolution of soluble rocks, including limestone and dolomite.” Medina County Environ. Action Ass’n v. Surface Transp. Bd., 602 F.3d 687, 694 n.12 (5th Cir. 2010).

opinion is from an entirely different field, that of an expert in karst hydrogeology.

Nevertheless, Crawford's expert report is troubling given the requirements of Rule 26(a)(2)(B). While the report informs the reader of the facts or data he considered, the exhibits utilized, his qualifications, the number of times he has testified in the last four years, and the method of his compensation Fed. R. Civ. P. 26(a)(2)(B)(ii-vi), the report does not meet the requirements of Fed. R. Civ. P. 26(a)(2)(B)(I), which necessitates "a complete statement of all opinions the witness will express and the *basis* and *reasons* for them[.]" (Emphasis added).

Crawford's report begins with his ultimate conclusion that there was a perennial stream at the location where the dam was built. Other than that, all Crawford states is that "my opinion is based on the following," and he then lists eight reports, but says virtually nothing about how those specific reports led to his conclusion. Because of that, there is some merit to Defendants' observation that "[t]here is no means by which another expert could assess Prof. Crawford's method of assessment from his report." (Docket No. 76 at 8).

"[A]n expert opinion must 'set forth facts' and, in doing so, outline a line of reasoning arising from a logical foundation." Brainard v. Am. Skandia Life Assur. Corp., 432 F.3d 655, 657 (6th Cir.2005). A "'report must be complete such that opposing counsel is not forced to depose an expert in order to avoid an ambush at trial; and moreover the report must be sufficiently complete so as to shorten or decrease the need for expert depositions and thus to conserve resources.'" Id. (citation omitted). "[I]f a party fails to provide information or identify a witness as required by Rule 26(a) or (e), the party is not allowed to use that information or witness to supply evidence on a motion, at a hearing, or at a trial, *unless* the failure was substantially justified or is harmless." Fed. R. Civ. P. 37(c)(1) (italics added).

In their Motion, Defendants do not move to bar Crawford from testifying as a sanction pursuant to Rule 37, but rather seek to preclude him from testifying because “the opinion that Professor Crawford offered in his report lacks a sufficient foundation under Federal Rule of Evidence 702 and 403 and under the standards for scientific evidence under Daubert.” (Docket No. 75 at 2). Given the present state of the record, the Court disagrees.

Crawford was deposed in this case, and he was extensively questioned about the basis for his opinion during the Daubert hearing. While Rule 26(a) seeks to prevent “ambush at trial” and to “shorten or decrease the need for expert deposition,” R.C. Olmstead, Inc. v. CU Interface, LLC, 606 F.3d 262, 271 (6th Cir. 2010), those concerns can become moot when a deposition is actually taken. E.E.O.C. v. Freeman, 626 F.Supp.2d 811, 821 (M.D. Tenn. 2009). Moreover, because one purpose of Rule 26(a)(2) is to provide notice, a “deposition disclosure may be curative,” id. and a Daubert hearing can serve to elucidate the basis for an expert opinion. See, Bro-Tech Corp. v. Thermax, Inc., 2010 WL 1409020 at *1 n.1 (E.D. Pa. 2010); Travelers Property & Cas. Corp. v. General Elec. Co., 150 F.Supp.2d 360, 367 n.3 (D. Conn. 2001).

Having considered Crawford’s testimony at the Daubert hearing, and having reviewed his deposition testimony, the Court finds that he is competent within the meaning of Fed. R. Evid. 702 to render the opinion that at the dam site there was a perennial stream fed by groundwater, and that there was a perennial spring upstream of the dam. Crawford candidly admitted that it is better when an expert does his own investigation, but noted that experts do rely upon the reports of others. He identified the sources he used,¹⁵ identified some problems with those sources (though not catching

¹⁵ During his testimony, Crawford indicated that, in addition to the sources listed in his expert report, he considered a report prepared by an engineer from J.R. Wauford & Company who installed weirs at three locations along a stream draining Egypt Hollow in order to collect stream flow data.

others), why he discounted or did not find important some of the information contained in those sources, and what he took from the sources to arrive at his conclusion from the perspective of a respected karst hydrogeologist.

The Court will allow Crawford to testify, but notes that this is a close question because Crawford's expert report (even as amplified by his deposition and Daubert hearing testimony) borders on being an *ipse dixit* opinion. See, Peterson v. Scotia Prince Cruises, Ltd, 323 F.Supp.2d 128, 130 (D. Me. 2004) (allowing proposed testimony which "appear[ed] to come close to testimony that is prohibited because it is connected to the facts 'only by the ipse dixit of the expert,'" because plaintiff "provided sufficient background, although barely, to allow a jury to weigh it"). "Daubert sets out a 'flexible' and more lenient rule that favors the admission of any scientifically valid expert testimony," Bonds, 12 F.3d 565, and "[c]ourts should resolve doubts regarding the usefulness of an expert's testimony in favor of admissibility." Marmo v. Tysons Fresh Meats, Inc., 457 F.3d 745, 758 (8th Cir. 2006).

E. Motion in Limine Relating to Donald W. Hubbs (Docket No. 77)

Hubbs is a wildlife and fisheries biologist for the Tennessee Wildlife Resources Agency ("TWRA") who has spent a significant portion of his career working in the Duck River. He holds a Bachelor of Science degree in wildlife management and a Master of Science Degree in biology, both from Tennessee Technological University. Presently, Hubbs is the Mussel Program Coordinator for TWRA, and is unquestionably a highly qualified scientist in relation to the study of mussels.

Hubbs has tendered an expert report titled "Effects of Tributary Impoundment on Biota of Duck River." (Hubbs Expert Report, Docket No. 67-1 at 57). As its very name suggests, the report

expresses Hubbs' opinion about the effect *an* impoundment would have on the ecological diversity of the Duck River, not about the effect *this* dam may actually have had on the Duck River.

After a discussion of Hubbs' background, the report describes (1) the Duck River watershed; (2) the economic significance of that watershed; (3) the "mineral rich geology and eroding limestone base" of the watershed which add nutrients necessary to the survival and growth of mussels, waterfowl, fish and mammals; (4) the importance of the Duck River, not only to Tennessee but also the world in terms of it repository of biological diversity (from 151 species of fish, to 56 species of mussels to 22 species of aquatic snails); (5) the "natural services" of "[c]omplex ecosystem like the Duck River watershed," including water supply, waste assimilation, and soil formation; (6) how tributary streams "serve as arteries of a mainstream river"; and (7) why, in the author's opinion, protecting the Duck River's bio-diversity is of vital importance. (*Id.* 58-60). Yet, conspicuously absent are opinions particular to Egypt Hollow.

The closest Hubbs comes to linking his belief about the effect of impoundments on tributaries to the facts in this case is set forth in the following paragraph of the expert report:

Tributary streams, such as Tumbling and Snake creeks, serve as the arteries of a mainstem river. The tributaries add water to the base flow of the Duck River, and also provide nutrients and flow refugia to the system, which are all important factors affecting habitat suitability for fish and invertebrates in river systems like the Duck and its tributaries. Damming tributary streams harms complex aquatic ecosystems present in large river watersheds by interrupting their connectivity. Impoundments cause flow pattern disruption, silt accumulation, loss of shallow water habitat, stagnation, pollution accumulation and nutrient poor discharges. This alteration of nutrient processing, water and habitat quality leads to reduced invertebrate and fish communities.

(*Id.* at 60). For a number of reasons, the Court concludes that Hubbs will not be allowed to offer his expert opinion in this case.

Hubbs points to no study or sources which establish that every impoundment on a tributary

reduces ecological bio-diversity in every downstream water. Perforce he points to no studies or sources which establish that the impoundment in this case affected Snake Creek, Tumbling Creek, or the Duck River. Nor does he point to any personal knowledge about specific facts or evidence which would support his hypothesis relating to the dam in this case, and he had never even been on Snake Creek before rendering his report.

In both his deposition and at the evidentiary hearing, Hubbs was asked about whether he had any specific facts or information that would support the opinion that the impoundment on Snake Creek affected the economy, recreation, wildlife, waterfowl, biology, or endangered species of the Duck River or the Duck River watershed. To each query, Hubbs replied in the negative. He also admitted that he did not have any facts or information to support an opinion that the impoundment on Snake Creek negatively affected the mussel population of the Duck River, an area of intense concern given his expertise.

It could be that, based upon his education and experience, Hubbs knows (or at least believes) that every impoundment of a stream affects every downstream river in the many ways he claims, and so the impoundment in this case had to have affected the Duck River in at least some of the same ways. But to arrive at that conclusion, Hubbs has to make an assumption crucial to the Government's case – there was a stream where the dam was built and, for his opinion to be helpful to the Government, that the dam was built on a water of the United States. Hubbs' opinion does not answer that question, even inferentially.¹⁶

Hubbs was called upon to render an opinion about “the effect of impoundments on tributary

¹⁶ In fact, Hubbs testified that his opinion would remain the same regardless of whether an impoundment was placed on a water of the United States. (See, Hubbs Depo., Docket No. 67-7 at 21).

streams,” and he assumed that the impoundment in this case was built on a flowing stream. (Docket No. 67-7 at 19 & 22-23). It is problematic at best for an expert to “assume[] as truth the very issue that [the proponents] need to *prove* in order to recover[.]” Clark v. Takata Corp., 192 F.3d 750, 757 (7th Cir. 1999) (italics in original).

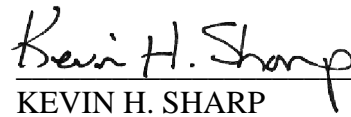
Effectively, the Government is seeking to put Hubbs on the stand so that he can describe for the jury a parade of horrors without having first established that the circus is even in town. To allow the Government to do so through this witness¹⁷ would prejudice the Defendants because Hubbs cannot even say what damage, if any, the dam in this case caused. This prejudice is not outweighed by the relevancy of Hubbs’ testimony within the meaning of Fed. R. Evid. 403, and the Government has not shown that Hubbs’ opinion is based upon sufficient facts or data, or reliable principles and methods as required by Rule 702. Accordingly, the Court will grant this Motion in Limine and bar Hubbs from testifying as an expert in this case.

IV. CONCLUSION

On the basis of the foregoing, the Court will deny Defendants’ Motions in Limine as they relate to the proffered expert testimony of Knight, Martin, Stokely, and Crawford. The Court will grant Defendants’ Motion in Limine relating to the expert testimony of Hubbs.

¹⁷ The Court recognizes that Martin also intends to testify about the effect of the dam on the chemical, physical and biological integrity of the Duck River. However, unlike Hubbs, Martin offers the opinion that the dam was built on a perennial stream, visited the site, and describes the studies which support the notion that damming tributaries affects downstream waters. Additionally, Martin examined two nearby streams that possessed comparable size drainage basins and fluvial geomorphology, and explained that the “[d]ata derived from these surveys lend insight into the chemical, physical, and biological conditions of what could be reasonably expected to exist in Snake Creek prior to impoundment and were important components in forming [his] opinion.” (Docket No. 67-1 at 12). He also “personally observed degradation of Snake Creek below the impoundment, including, “alteration of the morphological characteristics of the stream channel,” “[p]ost-precipitation of the metals on the substrate downstream,” and the “prevention of fish and aquatic life movement due to the dam functioning as a physical barrier.” (*Id.* at 17).

An appropriate Order will be entered.

A handwritten signature in black ink, reading "Kevin H. Sharp". The signature is written in a cursive style with a large, stylized "K" and "S".

KEVIN H. SHARP
UNITED STATES DISTRICT JUDGE